SECTION 09 83 14

ACOUSTIC COATING

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Spray-applied acoustical finish material.

B. Bonding agent.

1.02 RELATED SECTIONS

A. Precast concrete panels for acoustical barriers are specified in Section 03 40 00 – Precast Concrete.

B. Coordinate the work of this Section with the work of Contract Specifications for Mechanical, Plumbing, Fire-Suppression and Electrical, for providing facilities for sprinkler system and plumbing system piping, and for electrical conduits as required.

1.03 MEASUREMENT AND PAYMENT

A. General: Acoustical barriers and acoustical treatments will not be measured separately for payment but will be paid for as part of the Contract lump sum price for Architectural Work.

1.04 REFERENCES

A. American Society for Testing and Materials (ASTM):

1. ASTM C423 Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method

2. ASTM E84 Test Method for Surface Burning Characteristics of Building Materials

3. ASTM E605 Test Methods for Thickness and Density of Sprayed Fire-Resistive Material (SFRM) Applied to Structural Members

4. ASTM E736 Test Method of Cohesion/Adhesion of Sprayed Fire-Resistive Materials Applied to Structural Members

5. ASTM E759 Test Method for Effect of Deflection of Sprayed Fire-Resistive Material Applied to Structural Members

6. ASTM E761 Test Method for Compressive Strength on Sprayed Fire-Resistive Material Applied to Structural Members

7. ASTM E859 Test Method for Air Erosion of Sprayed Fire-Resistive Materials (SFRMs) Applied to Structural Members

1.05 SUBMITTALS

A. General: Refer to Sections 01 33 00 - Submittal Procedures, and 01 33 23 - Shop Drawings, Product Data, and Samples, for submittal requirements and procedures.

B. Product Data: Submit manufacturer's product data, including catalog cuts, specifications, and installation instructions.

C. Samples: Submit sample, 8 inches by 10 inches in size, of the spray-applied acoustical finish, applied full thickness on plywood backing.

D. Test Reports: Submit certified test reports on bond strength, compressive strength, density, and sound absorption (Noise Reduction Coefficient).

1.06 QUALITY ASSURANCE

A. Refer to Section 01 43 00 - Quality Assurance, for applicable quality assurance requirements.

B. Spray-applied acoustical finish shall be applied by a specialist applicator/subcontractor skilled and experienced in the type of work involved. The Contractor shall ensure that the applicator/subcontractor is licensed and approved by the acoustical material manufacturer.

C. The Contractor shall ensure that the acoustical material manufacturer inspects and approves the concrete substrate preparation and the acoustical material application, and provides field services at no additional cost to the District.

D. The Contractor shall make necessary arrangements with the acoustical material manufacturer to provide on-site consultation and inspection services to assure the correct substrate preparation and application of the acoustical finish material.

E. The Contractor shall ensure that the acoustical material manufacturer's representative is present at the time any phase of the work is started and periodically as the work progresses. Spray-applied acoustical finish shall be applied only over properly prepared substrate surfaces previously approved by the material manufacturer's representative.

F. Minimum dry thickness of the acoustical finish shall be 1 inch.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Spray-Applied Acoustical Finish Material: Heavy-duty, exterior grade, cementitious acoustical finish material, meeting the following physical performance standards:

1. Dry Density: Minimum average dry density of 40 pounds per cubic foot when tested in accordance with ASTM E605.

2. Compressive Strength: Minimum compressive strength of 850 psi when tested in accordance with ASTM E761.

3. Bond Strength: Minimum average bond strength of 7,200 psf when tested in accordance with ASTM E736.

4. Surface Burning Characteristics: When tested in accordance with ASTM E84:

Flame Spread:	0
Smoke Development:	0

5. Sound Absorption: 0.60 Noise Reduction Coefficient (NRC) at 1-inch thickness with coefficient not less than 0.19 at 250 Hz when tested in accordance with ASTM C423.

6. Deflection: Material shall not crack or delaminate from the surface to which it is applied when tested in accordance with ASTM E759.

7. Air Erosion: Maximum total weight loss of 0.005 gram per square foot when tested in accordance with ASTM E859.

B. Mixing Water: Clean and potable.

C. Bonding Agent: As recommended by the manufacturer for the type of substrate.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Examine concrete substrate for surfaces containing curing compounds, form coatings and oils, grease, paint, and other defects that may impair bond with the acoustical finish material.

B. Anchors, clips, hangers, support sleeves, and other attachments required to penetrate the acoustical finish for the hanging and support of pipes, ducts, and conduits shall be in place before the acoustical finish application begins. However, actual installation of piping, ducts, and conduits shall not take place until after the acoustical finish work is completed and dry as recommended by the acoustical material manufacturer.

3.02 PREPARATION

A. Remove form coatings and oils, dust, dirt, and any other incompatible material that may impair bond by scraping, brushing, scrubbing, or water blast as necessary.

B. Prepare substrate surfaces by filling voids, cracks, and offsets as recommended by the acoustical material manufacturer. Remove projections that may telegraph such imperfections.

C. Prepare and prime substrate surfaces with bonding agent recommended by the acoustical material manufacturer.

D. Provide masking to contain overspray and drop cloths to protect floors and other surfaces below from droppings and other debris.

3.03 APPLICATION

A. Application of the spray-applied acoustical ceiling finish shall be in accordance with the manufacturer's application instructions and recommendations.

3.04 FIELD QUALITY CONTROL

A. The Engineer shall sample and verify the thickness and density of the acoustical ceiling finish in accordance with ASTM E605.

END OF SECTION 09 83 14